



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Spike Miller
SPECIES Feline
BREED DSH
SEX Neutered Male
AGE 14 Years
WEIGHT 13.2 Pounds

Was blocked, cystotomy yesterday, U-cath in place, tachycardia and tachypneic . Azotemic. Current meds: Atenolol last dose 9p last night.
 Abnormal PE/Chem/CBC/UA Results: 8/5/2022- Creat 7.6, BUN 120, Cun/creat 16, u/a-Hematuria 2+, Prot 3+, Glu 2+, usg 1.030

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		155	0.55	1.47	0.59	31	63
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.3	1.6	1.2		1.0	0.74	NM

Adapted from June Boon, Veterinary Echocardiography, 1998
 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Parsippany AH

REFERRING VET

Dr. Dulude

INVOICE

40197

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Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics.. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum** and **pericardial** regions were free of masses in the visible window.

Urinary System

The **urinary bladder** revealed a deep pelvic urethral calculus lodged in the urethra, approximately 2.0 cm distal from the cystourethral junction, measuring 0.59 cm.

The **left kidney** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortex presented largely uniform texture with some increased



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echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. Slight pyelectasia noted in the left kidney. The left kidney measured 4.2 cm.

The **right kidney** was swollen and measured 4.4 cm. Pyelectasia noted and pericapsular inflammatory pattern.

SPECIES

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Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.44 cm. The right adrenal gland measured 0.48 cm.

BREED

DSH

Spleen

SEX

Neutered Male

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

AGE

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Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

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The **stomach** was overdistended with largely anechoic fluid. The pylorus was not overtly obstructed. The gastric overdistention is likely owing to ileus. Variable gastrointestinal thickening noted with spastic bowel.

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Pancreas

The **pancreas** was hypoechoic and irregular, measuring 1.13 cm in the right limb. Heterogeneous parenchymal changes noted.

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Free Abdomen

Echogenic free fluid noted cranial to the pylorus and adjacent to the liver.

REFERRING VET

Dr. Dulude

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Obstructive urolithiasis, solitary calculus noted
- Variable gastrointestinal thickening
- Age related left renal changes, swollen right kidney
- Right limb pancreatitis pattern
- Free fluid

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of primary cardiac disease influencing the current presentation.

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A large amount of echogenic free fluid is noted in the abdomen. Recommend immediate exploratory surgery to assess the bladder integrity to ensure a bladder rent is not an issue, as well as a source of the free fluid. Retrograde flushing of the urethra indicated. No contraindication to anesthetic procedure based on the cardiac presentation. Guarded prognosis. No overt evidence of neoplasia, yet cannot be completely ruled out as a cause of the free fluid. Some level of pancreatitis also evident.

BREED

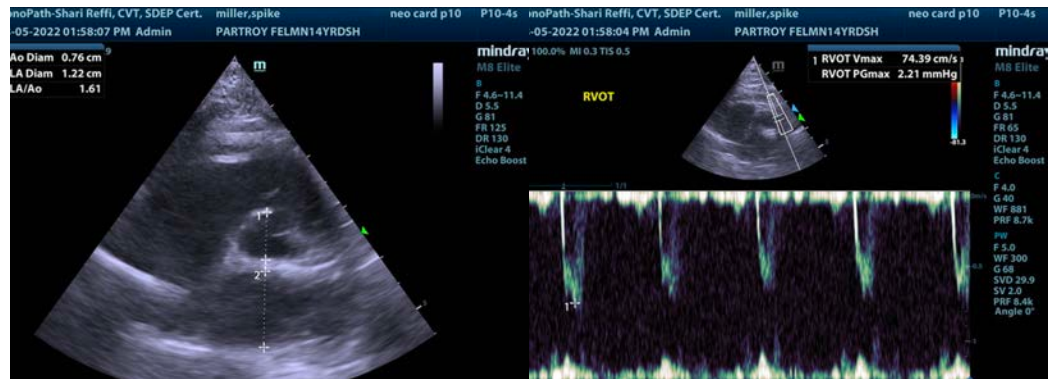
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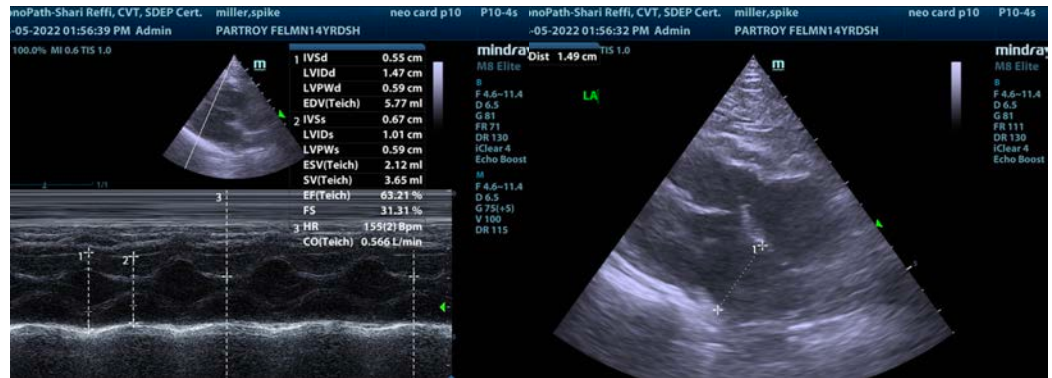
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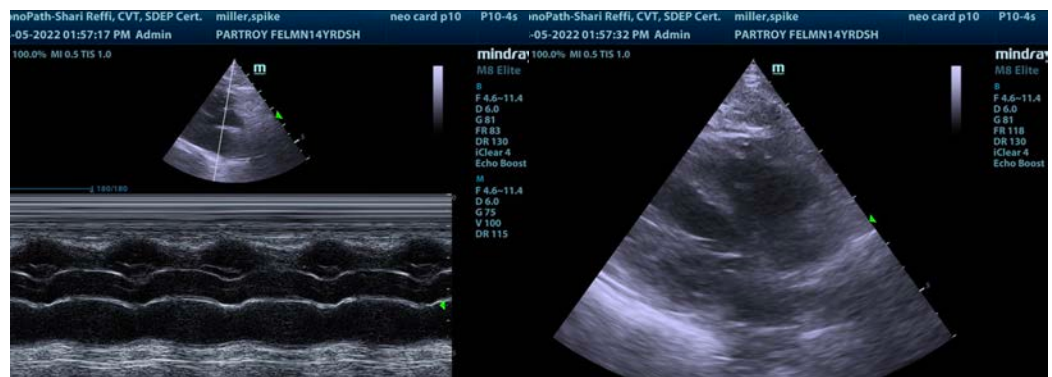
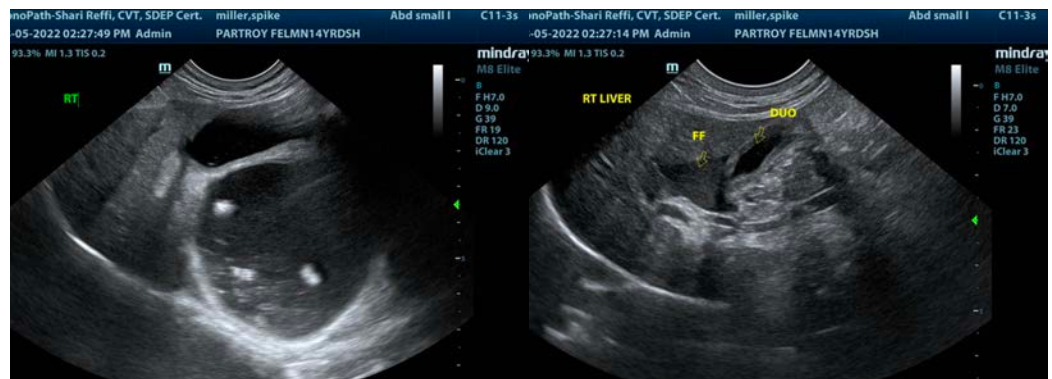
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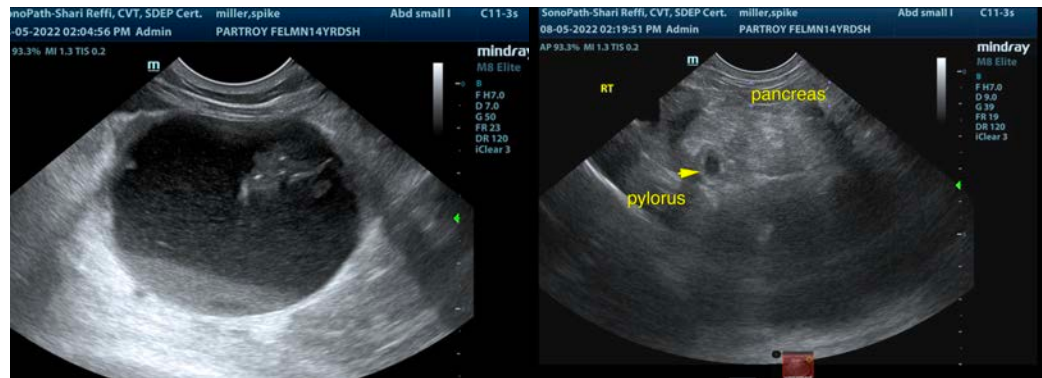
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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